

ISSUES , IDEAS
AND
INFORMATION
FOR PSYCHOLOGY
STUDENTS

NO.6 - STANLEY
MILGRAM AND
OBEDIENCE

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1. A MODERN DAY REPLICATION OF MILGRAM - ETHICALLY ANY BETTER?

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1.1. INTRODUCTION

For much of the first half of the twentieth century obedience to authority was viewed in psychology as a desirable thing for children, for example. However, Stanley Milgram showed clearly "the horror manifested when unquestioning obedience to authority prevailed" (Benjamin and Simpson 2009).

In fact:

When you think of the long and gloomy history of man, you will find more hideous crimes have been committed in the name of obedience than have ever been committed in the name of rebellion (Snow 1961; quoted in Benjamin and Simpson 2009 p12).

Milgram (1963) found that "for many persons obedience may be a deeply ingrained behaviour tendency, indeed a prepotent impulse overriding training in ethics, sympathy, and moral conduct".

An acute awareness of Nazi German behaviour in World War II had led Milgram to an interest in "national character". His early research on conformity found that Norwegians were more conforming than French participants on Asch-type tasks (Milgram 1961). So the question was asked as to whether those nations who committed atrocities in World War II were different to other countries.

Milgram tried to answer not only psychological questions about obedience to authority, but also moral ones, and it is an "ironic juxtaposition" that his first experiments began just as Adolf Eichmann was tried and

hung in Israel for Nazi war crimes. The defence used by many Nazis when tried after the Second World War was obeying orders (Benjamin and Simpson 2009).

Stanley Milgram's (1963, 1974) research on obedience is very famous both within and outside psychology, to make an understatement, and "a social psychology textbook that does not include a discussion of the research is almost unthinkable" (Burger 2009).

Elms (2009) noted that:

Those first experiments took place 46 years ago. Most social-psychological experiments from that era have long since been forgotten or invalidated or absorbed into the field's amorphous body of data and theory. But the Milgram studies continue to be a focus of interest and debate, not only among social psychologists but in other scholarly fields and in popular culture, and not only in the United States but around the world (p33).

It is often seen as having "the last word on the subject" as it "assumed rather quickly a kind of larger than life essence" (Miller 2009). Ross and Nisbett (1991) described the experiments as "part of our society's shared intellectual legacy". Alan Elms, who was Milgram's research assistant on the experiments, saw the studies as "among the most valuable experiments ever done in social psychology" (Elms 2009).

1.2. BASICS OF MILGRAM'S RESEARCH

Advertisements were placed in newspapers (figure 1.1) in the Connecticut area of the USA asking for volunteers for a memory experiment (with expenses being paid). Forty males aged between 20 and 50 years were chosen for the first experiment (Milgram 1963).

The participants were tested one at a time at the Psychology Laboratory at Yale University. When the participants arrived, they were introduced to a middle-aged man, who appeared to be another participant, but was a confederate of the experimenter.

Randomly it seemed, the participant was chosen to be the "teacher", and the confederate to be the "learner". The participants were not aware that the experiment was a "set-up", for them everything appeared to be real.

The participant was shown a machine with gradings of electrical shocks of 15 volts from 0 to 450 volts. They were told that if the "learner" in the next room failed on a series of memory tests, the "learner" should be given increasing electric shocks as punishment.

Public Announcement

WE WILL PAY YOU \$4.00 FOR ONE HOUR OF YOUR TIME

Persons Needed for a Study of Memory

*We will pay five hundred New Haven men to help us complete a scientific study of memory and learning. The study is being done at Yale University.

*Each person who participates will be paid \$4.00 (plus 50c carfare) for approximately 1 hour's time. We need you for only one hour: there are no further obligations. You may choose the time you would like to come (evenings, weekdays, or weekends).

*No special training, education, or experience is needed. We want:

Factory workers

Businessmen

Construction workers

City employees

Clerks

Salespeople

Laborers

Professional people

White-collar workers

Barbers

Telephone workers

Others

All persons must be between the ages of 20 and 50. High school and college students cannot be used.

*If you meet these qualifications, fill out the coupon below and mail it now to Professor Stanley Milgram, Department of Psychology, Yale University, New Haven. You will be notified later of the specific time and place of the study. We reserve the right to decline any application.

*You will be paid \$4.00 (plus 50c carfare) as soon as you arrive at the laboratory.

TO:

PROF. STANLEY MILGRAM, DEPARTMENT OF PSYCHOLOGY,
YALE UNIVERSITY, NEW HAVEN, CONN. I want to take part in
this study of memory and learning. I am between the ages of 20 and
50. I will be paid \$4.00 (plus 50c carfare) if I participate.

NAME (Please Print)

ADDRESS

TELEPHONE NO. Best time to call you

(Source: Olivier Hamman; copied from original)

Figure 1.1 - Type of advertisement used by Milgram to recruit participants.

The participant believed that the machine is real

because they were given a mild electric shock as part of the testing of the machine. So Milgram had set up the situation thus: would an ordinary man give increasing punishment to a stranger in the next room because an experimenter in a white coat told them to do so? The maximum voltage of 450 would easily kill a person.

Beside each voltage was a statement, in case the participant was not sure of their seriousness; eg: 300 volts: "intense shock"; 450 volts: "XXXX".

The procedure was standardised both in the responses of the "learner" which were recorded, and those of the experimenter.

If the participants still did not continue, the experiment was stopped at the point of obedience or disobedience.

Psychiatrists predicted before the experiment that 0.1% of people would obey until 450 volts (ie: 1 in 1000 people).

In the first experiment, of the 40 men, 26 obeyed to 450 volts. Nobody stopped before 300 volts, which is still probably enough to kill someone. Thus the level of obedience (ie: to 450 volts) was 65%.

In total Milgram's experiments used approximately eight hundred volunteers (Blass 2009).

1.3. OBEDIENCE AND DISOBEDIENCE

It is agreed that individuals obey authority figures in inflicting pain for a number of reasons highlighted in Milgram's research, but primarily it is an underestimation of "the power of situational forces" (Burger 2009). As Milgram (1974) observed:

The disposition a person brings to the experiment is probably less important a cause of his behaviour than most readers assume. For the social psychology of this century reveals a major lesson: Often, it is not so much the kind of person a man is as the kind of situation in which he finds himself that determines how he will act (p205; quoted in Blass 2009).

There are key features of the situation that are involved:

i) The commands are given by a legitimate authority figure, usually wearing a uniform (in the case of the experiment, a lab coat), and their perceived expertise (Morelli 1983).

ii) The gradual incremental nature of obedience

(Gilbert 1981).

The participant is not asked immediately to give a 450-volt shock, but initially 15 volts and an increase of 15 volts each time. This can be linked to the foot-in-the-door technique (Burger 1999).

iii) Information about how to behave.

The experimental situation was new to the participants, and it was unclear to them how they should behave, particularly when the experimenter (assumed to know what is going on) ignored the protests of the "learner". When Milgram (1974) used two (contradictory) experimenters, obedience¹ was 0%, as when there were three "teachers" (including two confederates who refused to continue) (obedience 10%). Individuals look to others to help them make sense of the situation and, especially, the norms of the situation. Nissani (1990) emphasised the unfamiliarity with experimental norms, and the ambiguity about the rights of the "learner" compared to the experimenter.

iv) No responsibility for actions (Bandura 1999).

The experimenter in Milgram's experiment made it clear that they were wholly responsible for what happened.

However, when Milgram (1974) asked participants about the responsibility for events in the experiment using a "responsibility clock", he did not find a shift in responsibility to the experimenter. The "responsibility clock" was a disc with three moveable rods that allowed individuals to divide it into three parts to represent the share of the responsibility of the participant, experimenter and the "learner". Obedience participants allocated themselves less responsibility than defiants, but both attributed similar levels of responsibility to the experimenter. The difference was that obedient participants allocated more responsibility to the "learner" (victim). In a blaming-the-victim scenario, the perception was that the "learner" should have done more to stop the experiment (Blass 2009).

Though the emphasis is upon the situational causes of obedience, Milgram did investigate personality types and obedience. Twenty fully obedient participants and twenty disobedient ones from the early studies were given

¹ Obedience was defined as continuing to 450 volts (maximum).

personality tests (Elms and Milgram 1966). There was little difference between the two groups. The only clear pattern was that fully obedient participants were more authoritarian as measured by the California F Scale (Adorno et al 1950).

Blass (2009) has questioned the assumption that situational variables caused the obedience because of inconsistencies of findings between different conditions. He statistically analysed four of Milgram's early conditions - remote ("learner" protests via banging on the wall), voice-feedback (vocal protests given), proximity ("learner" in same room), and touch-proximity ("teacher" has to place "learner's" hand onto shock plate). Table 1.1 lists the rates of obedience.

CONDITION	OBEDIENCE (%)	OBEDIENCE (N)
Remote	65	26
Voice-feedback	62.5	25
Proximity	40	16
Touch-proximity	30	12

Table 1.1 - Levels of obedience in four conditions of Milgram's experiments.

A chi-square analysis of the four conditions together shows a significant reduction ($p < 0.01$) in obedience as the "learner" is closer to the "teacher". But this overall analysis hides a puzzle (Blass 2009). There is little (non-significant) reduction in obedience between remote and voice-feedback, and between proximity and touch-proximity. Such problematic findings required replications to explore the exact nature of the situation that does and does not reduce obedience. The movement of the "learner" into the same room (remote/voice-feedback vs proximity/touch-proximity) does significant reduce obedience, but not proximity vs touch-proximity, for example.

Continuing to obey until the maximum after obeying at the first clear cries of pain (150 volts) could be explained by cognitive dissonance (Festinger 1957).

If an individual who obeys at 150 volts, then disobeys later, it creates a cognitive dissonance in relation to the reason the "learner's" cries were ignored at 150 volts. So an "attitude change" occurs, like obeying the authority figure ("I was just obeying orders")(figure 1.2).

- 1 = Pressing shock keys
- 2 = Learner's cries
- 3 = Authority figure's demands to continue

Cannot change 1 or 2, must change 3

Conclusion - Just obeying orders/authority figure has right to demand such behaviour

Figure 1.2 - Cognitive dissonance and obedience to authority.

Most of the emphasis in Milgram's research was upon obedience, and less attention on those who did not obey. Packer (2008) reanalysed the data from eight of Milgram's experiments ² in terms of likelihood of stopping before 450 volts.

The greatest point of disobedience (ie: stopping completely) in the eight experiments together was 150 volts (36.88% of participants) followed by 315 volts (10.63%), while 50% obeyed to the maximum voltage. At 150 volts the "learner" expressed pain and asked to be released for the first time. There was no relationship between expressions of pain subsequently and disobedience. The "learner's" cries at 150 volts meant that "disobedient participants appeared to respond to a perceived right that stopped them from continuing without the learner's consent" (Packer 2008 p303) rather than the pain.

Gilbert (1981) felt that 150 volts, because of the response of the "learner", was a "qualitative change", and such a change is more likely to induce disobedience than a "quantitative change" (ie; 15-volt increase each time).

Early resistance to authority is key. From a reanalysis of the actual interactions between the experimenter and the "teacher" in Milgram's later experiments, Modigliani and Rochat (1995) pointed out that "the earlier in the procedure subjects begin to resist notably, the more likely they will be to end up defiant" (p113). Using the data from the Bridgeport office version of the experiment, Modigliani and Rochat found that 83% of those who showed defiance before 150 volts, tended to stop at 150 volts compared to none of those who obeyed to 450 volts.

Rochat and Modigliani (1995) showed support for this early resistance in the case study of the French village of Le Chambon during the Nazi occupation. Due to the immediate resistance by the village leaders, the whole

² Experiments 2-6 and 8-10 (Milgram 1974) with 320 participants.

village refused to persecute minorities, and helped in their escape. It was estimated that 5000 refugees found safe haven here during World War Two.

1.4. TO REPLICATE OR NOT?

There are many questions that arise from Milgram's experiments, which if it had been less controversial topic, would have been addressed with subsequent replications and variations.

One of the most important questions being an explanation for obedience including a theoretical model. There are explanations (as discussed above) and Milgram did propose the "agency shift" theory (ie: removal of personal responsibility), but these do not satisfy everybody.

Other unanswered questions might include:

For example, how would obedience to malevolent authority be influenced if the victim (ie: learner) was a member of a discriminated or stigmatized group? Would a person who obeyed completely be likely to engage in even further actions against another person, at a later time, in another setting? Do self-perceptions change in predictable ways among those who defy as well as obey authority, and are these perceptions, in turn, predictive of further destructive or pro-social actions? Do individuals rationalize their destructive obedience and see it as desirable and useful behaviour?... How do participants in the subordinate role partition responsibility for their actions? What behavioural effects would occur if the "teacher" had an opportunity to reflect upon, and to discuss with others, the nature of the upcoming shock/punishment task instead of being thrown into the escalating situation alone and virtually without warning? What sorts of post-experimental accounts would defiant as well as obedient participants give for their behaviour? (Miller 2009 p21).

A recent and extensive "pseudo-replication"³ is a series of nineteen experiments in the 1980s in Holland using over 400 participants (Meeus and Raaijmakers 1986, 1995). The grading of the task was fifteen negative remarks ("stress remarks") to be detrimental to an unemployed job applicant (confederate), who was showing their ability to work under stress (which was not a

³ The obedience task is different to Milgram so that is why it is classed as a "pseudo-replication".

requirement of the job). Each remark became more negative and stressful, and obedience measured by participants going all the way to the 15th remark. Table 1.2 summarises the level of obedience in different conditions, and table 1.3 compares the studies to Milgram's experiments.

EXPERIMENT DETAILS	LEVEL OF OBEDIENCE (%)
• Baselines	83-91
• Control - no instructions to make remarks and participants could choose which remarks to make	0
• Expected behaviour - written description of experiment and participants asked to rate self beforehand on how far obey	9
• "Experimenter absent"	36
• "Two peers rebel" - two confederates with participant, who refuse to obey	16
• Advance information - participants told one week beforehand of experiment and consequences to applicant (expected that obedience would fall in this condition)	100
• Legal liability of participants for whatever happens during experiment	30
• Advance information and legal liability of participant	20
• Advanced information and psychology department legally responsibility	67
• Role-playing variations	14-73
Milgram replications:	
• Advanced information - painful shocks	57
• Advanced information - deadly shocks	43

(After Moxon et al 2003)

Table 1.2 - Levels of obedience in various conditions of Meeus and Raaijmakers' experiments.

While direct replications were possible, up to 1985, until the ethical concerns stopped them, there was no relationship between when a study was conducted and the amount of obedience (Blass 2009).

	MILGRAM	MEEUS & RAAIJMAKERS
PLACE/TIME	USA/1960s	Holland/1980s
TASK FOR OBEDIENCE	Electric shocks to stranger	Make stressful comments to unemployed job applicant (stranger)
CONTROL GROUP	No	Yes
EXPECTED BEHAVIOUR - participants asked to predict how far they would obey beforehand	No	Yes
ADVANCE INFORMATION - given to participants beforehand	No	Yes
ROLE-PLAY VERSIONS	No	Yes
ORIGINAL LEVEL OF OBEDIENCE	65%	91%
"EXPERIMENTER ABSENT" CONDITION - level of obedience	20.5%	36%

(After Moxon et al 2003)

Table 1.3 - A comparison of Milgram's and Meeus and Raaijmakers' studies on obedience.

While direct replications were possible, up to 1985, until the ethical concerns stopped them, there was no relationship between when a study was conducted and the amount of obedience (Blass 2009).

Variations on Milgram's research have been tried out by researchers. For example, the participants as victims. Sackhoff and Weinstein (1988) had participants put themselves in apparent personal danger if they obeyed. Thirteen female and four male volunteers were asked by a male uniformed authority figure to get a box from a cabinet with "Danger" on the door. Only 4 of the 17 obeyed (24%).

1.5. A MODERN REPLICATION - BURGER (2009)

It is often argued that Milgram's results would not hold today because individuals are more aware of "blindly following authority". However, Burger (2009) felt that this view showed the fundamental attribution error, and an overemphasis on individual factors, like "obedient

personality", as causing the behaviour.

The ethical concerns about the deception and distress to the participants has meant that replications in recent years are rare. Benjamin and Simpson (2009) saw the reaction to Milgram's studies in terms of new ethical guidelines for psychologists as producing a "shift from laboratory studies with higher experimental realism and lower mundane realism to studies with lower experimental realism and higher mundane realism that examined individuals more within their natural environment.." (p17).

The challenge for Burger was to reduce the ethical concerns of the Milgram paradigm while maintaining a comparable experiment (Miller 2009) ⁴.

Most of the focus was upon obedience to the maximum voltage whereas Burger (2009) argued that 150 volts was key. When this key was pressed, the "learner" protest and demanded to stop the experiment. Of the original forty participants, 79% of those who continued past 150 volts went to the maximum. Burger's (2009) replication of Milgram thus stopped at 150 volts, and obedience to the maximum was assumed from the pressing of the 175-volt key or not. Seventy participants (29 male and 41 female) were finally used from recruitment through advertisements similar to Milgram's with ages ranging from 20 to 81 years.

Burger (2009) included a number of extra safeguards concerning the welfare of the participants:

i) Screening of the volunteers had two steps to guarantee exclusion of participants who would suffer from participating in the experiment. The first stage involved questions about knowledge of psychology to see if the volunteer might be familiar with Milgram's work. There were also general questions about psychological state, like "Are you currently receiving psychotherapy?". The second stage involved four psychometric questionnaires including the Beck Depression Inventory (Beck 1972), and a psychiatric-based interview. Approximately 30% of volunteers were excluded at the first stage and 40% at second leaving 70.

ii) The right to withdraw was emphasised three times (two of them in writing) including no loss of participation fee (\$50).

⁴ See appendix for example of recent approach to studying extreme behaviour while dealing with ethical concerns.

iii) Participants received a 15-volt sample shock to see how it felt, whereas Milgram used 45 volts.

iv) Debriefing was immediate. As soon as the reaction after pressing the 150-volt key was measured, the study ended, and the "learner" entered the room. Milgram basically debriefed the participants soon after the experiment, but because he "anticipated a much more extensive series of experiments than Burger did, he maintained some degree of deception of most participants until he was ready to send them a full report on the intent of the research, the experimental procedures, and his overall research findings" (Elms 2009 p34).

v) The experimenter who ran the actual experiment was a clinical psychologist who could stop the study at any signs of excessive stress.

The study took place at Santa Clara University in California. The base condition was designed to resemble Milgram's experiment as closely as possible (table 1.4), which included almost verbatim use of Milgram's script (table 1.5).

	BURGER (2009)	MILGRAM (1963)
Experimenter	White male, mid-30s	White male, 31 years old, high school biology teacher (John)
Learner	White male, 50s	White male, 47 years old, accountant (James McDonough)
Payment to	\$50	\$4.50
Allocation to	Rigged draw	Slips of paper in hat
Sample shock given to	15 volts	45 volts
Responses of learner at different voltages	75 - grunt 90 - louder grunt 105 - louder grunt 120 - louder grunt 135 - louder grunt 150 - demands to be	75 - "ugh" 90 - louder 105 - louder 120 - louder 135 - louder 150 - demands to be

Table 1.4 - Comparison of key aspects of experimental design.

SITUATION

Learner admits to heart problem

"..the confederate said, 'I think I should say this. When I was in Kaiser Hospital a few years ago, they detected a slight heart condition. Nothing serious. But as long as I'm getting these shocks—how strong are they? How dangerous are they?' The experimenter answered, 'While the shocks may be painful, they're not dangerous'" (Burger 2009 p6).

Instructions given to teacher

"The experimenter also said, 'If he gives the wrong answer, you say, 'wrong' and then tell him the number of volts you are going to administer. Administer the punishment, read him the correct word pair once, and then go on to the next line.' After reviewing the procedure one more time, the experimenter said, 'Each time he gives a wrong answer, you move up one switch on the shock generator. It's important that you follow the procedure exactly'" (Burger 2009 p7).

Learner's response to 150-volt shock

"Ugh. That's all. Get me out of here. I told you I had heart trouble. My heart's starting to bother me now. Get me out of here, please. My heart's starting to bother me. I refuse to go on. Let me out" (Burger 2009 p7)

Experimenter's prods

"'Please continue' or 'Please go on'; 'The experiment requires that you continue'; 'It is absolutely essential that you continue'; and 'You have no other choice, you must continue'" (Burger 2009 p7).

Other experimenter responses

"Again following Milgram's procedures, the experimenter gave predetermined answers to specific questions by the participant. If the participant asked whether the learner would suffer physical damage from the shocks, the experimenter said, 'While the shocks may be painful, there is no permanent tissue damage.' If the participant said that the learner did not want to continue, the experimenter said, 'Whether the learner likes it or not, you must go on until he has learned all the word pairs correctly.' If the participant asked who was responsible for any harm to the learner, the experimenter said, 'I am responsible.' If the participant asked about the money he or she was given for participation or wanted to give back the money, the experimenter said, 'The money is yours to keep regardless.' Any of these specific questions also was considered an indication that the participant did not want to continue. To make the answer a response to the participant's question or comment and to keep from sounding repetitive, the experimenter sometimes varied the wording of these statements slightly" (Burger 2009 p7).

Table 1.5 - Almost exact script used from Milgram's study.

Burger (2009) reported that 30% of participants (n = 12) stopped at 150 volts (or earlier) and 28 participants (70%) continued after the 150-volt switch ⁵. There were little gender differences, and no significant difference to Milgram's results (table 1.6).

	BURGER (2009)			MILGRAM
	Total	Male	Female	
Stopped at or by 150v	30.0	33.3	27.3	17.5
Continued after 150v	70.0	66.7	72.7	82.5

(After Burger 2009)

Table 1.6 - Summary of results (%) in base condition.

Burger (2009) included a "modelled refusal condition" where a confederate "teacher" refused to continue after 90 volts. The real participants was asked to read out the words for the memory test while the confederate "teacher" gave the electric shocks. When the confederate refused to continue, the participant was instructed to give the next electric shock.

In the condition, contrary to expectations, significantly less participants did not stop at 150 volts or less than in the base condition (table 1.7).

	TOTAL	MALE	FEMALE
Stopped at or by 150v	36.7	45.5	31.6
Continued after 150v	63.3	54.5	68.4

(After Burger 2009)

Table 1.7 - Summary of results (%) from modelled refusal condition.

Burger (2009) measured two personality variables - empathic concern (Interpersonal Reactivity Index: Empathic Concern subscale; Davis 1994 ⁶) and "desire for control" (Desirability of Control Scale; Burger 1992) - and found no differences between participants who obeyed and disobeyed (table 1.8).

⁵ This was a willingness to continue by reading the next set of words for the memory test. No electric shocks were given above 150 volts.

⁶ This measures "the tendency to experience feelings of sympathy and compassion for unfortunate others" (Davis 1994).

	EMPATHIC CONCERN	DESIRE FOR CONTROL
Obedied	18.84	100.59
Disobeyed	20.04	103.43

(After Burger 2009)

Table 1.8 - Mean personality test scores on two characteristics for both conditions combined (base and modelled refusal).

Burger (2009) also rated when participants received the first prod from the experimenter ("Please continue"). A twelve-point rating scale was developed where 12 equalled continued after 150 volts without prod and one represented prod before pressed any switch (table 1.9).

- 1 = Prod before pressing any switch
- 2 = Prod after pressing 15-volt switch
- 3 = Prod after pressing 30-volt switch
- 4 = Prod after pressing 45-volt switch
- 5 = Prod after pressing 60-volt switch
- 6 = Prod after pressing 75-volt switch
- 7 = Prod after pressing 90-volt switch
- 8 = Prod after pressing 105-volt switch
- 9 = Prod after pressing 120-volt switch
- 10 = Prod after pressing 135-volt switch
- 11 = Prod after pressing 150-volt switch
- 12 = Continued after 150 volts without prod

Table 1.9 - Scale for measuring timing of first prod by experimenter.

The mean score in the base condition was 7.65, which meant that the average first prod was given after 90 or 105 volts. Participants who stopped before 150 volts had a significantly lower first-prod score than those who continued after 150 volts (6.52 vs 9.43). The mean first-prod score for men was 8.34 and 8.56 for women.

High empathic concern scorers had earlier first-prod scores ($r = -0.32$ for combined conditions; $p < 0.01$). Individuals with high desire for control also had earlier first-prod scores, but only in the base condition ($r = -0.33$; $p < 0.05$).

Burger's (2009) study was only a partial replication of Milgram's and there were differences to the original (table 1.10). However, Burger said, "In short, I am as confident as a psychology researcher can ever be that my findings can be legitimately compared with Milgram's" (2009 p10).

DIFFERENCES

- Stopping at 150 volts meant it had to be assumed that the participants would have continued to 450 volts
- In the modelled refusal condition there was one confederate refusing whereas Milgram used two confederates refusing
- More extensive screening than Milgram might have influenced the final sample
- Milgram only used adults 50 years old or less, Burger had some older participants
- Burger's sample was more ethnically diverse: 54.3% White, 18.6% Asian American ⁷, 12.9% Hispanic
- More college-educated in Burger's sample (82.9%)
- Location of study: Linsly-Chittenden Hall basement laboratory, Yale University, and offices in Bridgeport (Milgram)(Blass 2009) vs California
- Time of study: 7/8/61 - May 1962 (Milgram)(Blass 2009) vs early 21st century

Table 1.10 - Key differences between Burger and Milgram.

It could be argued that Burger's study is not a replication ⁸ because it failed to produce the powerful emotional reaction (which Milgram saw as one of his findings). These reactions "revealed that participants would, in certain situations, exhibit very high rates of obedience while simultaneously experiencing extreme discomfort and personal misgivings regarding their own behaviour" (Miller 2009 p24).

The failure of participants to copy the refusing model could be because the study did not produce a moral conflict such that individuals sort to "find a way out" (ie: copying a disobedient confederate)(Miller 2009).

Twenge (2009) focused upon differences in disobedience among male participants. One-third of men disobeyed in Burger's study compared to 17.5% in Milgram's experiments. She observed that:

Consistent with the growing individualism of

⁷ Twenge (2009) felt that the number of Asian Americans was larger than the distribution within the general US population, and such individuals can be more obedient than individuals from other ethnic groups.

⁸ Elms (2009) called it "obedience lite".

American culture and its citizens, obedience seems to have decreased—and might have been shown to decrease even more if the two samples were more comparable. However, even the tremendous cultural shifts of the last four decades cannot completely change the social norm of obedience. Americans are different now, but the situation still strongly influences our behaviour (p30).

1.6. ETHICS OF OBEDIENCE RESEARCH

There are many ethical issues related to experiments in psychology that Milgram's work highlighted. This included deception and distress to the participants. While Miller (2009) felt that the participants' right to withdraw was the most important ethical concern. Could they really leave the situation because of the pressure to continue from an authority figure? Because of the ethical concerns, Smith (1976) admitted: "I wouldn't do such a study, but I really respect Milgram's right to have done it" (quoted in Miller 2009).

Though no electric shocks were actually given, for the participants, they believed the scenario. Milgram (1963) admitted that the participants:

..were observed to sweat, tremble, stutter, bite their lips, groan and dig their fingernails into their flesh. These were characteristic rather than exceptional responses to the experiment (p377).

Baumrind (1971) felt that:

Fundamental moral principles of reciprocity and justice are violated, when the research psychologist, using his position of trust, acts to deceive or degrade (p890).

Milgram (1964) defended himself: "the problem of destructive obedience, because it is the most disturbing expression of obedience in our time and because it is the most perplexing, merits intensive study". This is often seen as the "end justifies the means" argument (Brewer 2001).

At the time of Milgram's (1963) research, Diana Baumrind (1964) was the most critical about ethics. Milgram (1964) defended himself. Here is a summary of the three main arguments:

1. Stress to participants

Baumrind - The anguish and distress caused to the participants was an unacceptable level.

Milgram - Did not intend the stress, and had no idea of the outcome.

Brewer (2001) - Milgram did not know the outcome initially, but he performed nineteen different versions of the experiment over many years.

2. Psychological harm to participants

Baumrind - Potential permanent psychological damage caused to the participants.

Milgram - The participants were debriefed after the experiment. Also they were visited by a psychiatrist 1 year after, who found no evidence of mental illness caused by the experiment.

Brewer (2001) - The experiment may not have caused major psychological problems, but individual's self-esteem may have been lowered leaving a general negative feeling about themselves.

3. Informed consent

Baumrind - No informed consent for what actually happened in the experiment, consent only given for a memory experiment.

Milgram - Afterwards participants reported being glad to have taken part in the experiment. 84% said they were "glad" or "very glad" compared to 1.3% for "sorry" or "very sorry" to have taken part. 74% felt they had learned something of personal importance.

Brewer (2001) - How do we know that the questionnaire replies were not a product of obedience, in the same way as the obedience in the experiment?

How does the Burger (2009) study fare in terms of these three debated issues?

i) Stress - Less because the experiment stopped at 150 volts, and every attention was given to unexpected or excessive stress to participants.

ii) Psychological harm - The debriefing was immediate and the participants met the "learner" who emphasised that they were fine. However, those individuals who obeyed after 150 volts may have felt their self-esteem was lowered by agreeing to hurt (even if only slightly) a stranger asking not to be shocked. It was cruelty if nothing else.

However, this is very tame compared to the "new cruelty" of many television shows and everyday life (Gill2008).

iii) Informed consent - This was still a problem because the participants volunteered for a memory experiment.

As with Milgram's experiments, the participants were deceived in Burger's study. Table 1.11 summarises the ethical issues related to both studies.

ETHICAL ISSUE	MILGRAM	BURGER
Informed consent	Not for obedience experiment	
Deception	Many, eg: electric shocks, "learner's" pain	
Debriefing	Yes	Immediate
Right to non-participation	Only volunteers used	
Right to withdraw	Given But could participants freely leave?	Emphasised
Distress to participants	High	Less

Table 1.11 - Ethical issues and Milgram's and Burger's studies.

Miller (2009) felt that the amount of screening of participants by Burger was "ethical overkill": "from an ethical point of view, the 150-volt solution might, in itself, have been more than satisfactory, that is, without the additional screening" (p23). In many ways, the study was designed to gain ethical clearance from his university/departmental research ethics committee (Miller 2009).

Generally, Burger (2009) fares better on ethical issues than Milgram, but that is only in relation to narrow specific concerns. Feminist researchers would dispute the wider ethical issues involved.

There are a number of issues that are important to

feminist researchers (Brewer 2001):

i) Power relations in research - The researcher may feel that they are on equal terms with the participants, but researcher may appear as an authority figure or has status in the eyes of the participants.

ii) Accountability - It is important for feminist researchers to make themselves accountable, first and foremost, to the participants. In other words, the rights of the participants are placed above all other pressures and demands of the research - the researcher themselves or the funding body of the research. The integrity of the researcher becomes as important as the findings themselves.

iii) Outcome of the research - Rather than just worrying about removing negative effects of the research, feminist researchers aim for outcomes that will bring positive benefits to the participants. This is sometimes called "consciousness-raising", and involves the improvement of the individual's life by making them more aware of issues in their lives. This can happen to both the participant and the researcher.

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1.8. APPENDIX: THE BUG-KILLING PARADIGM - ANOTHER WAY TO STUDY EXTREME BEHAVIOUR

1.8.1. INTRODUCTION

The fact that obedient participants continue to increasingly shock the "learner" in the Milgram (1974) experiments has been applied to understanding killing in the real world. The increase in severity of electric shocks (or killings) may be motivated by efforts to justify the initial behaviour. Further aggression/killing stems from attempts to cope with the guilt of the initial acts or the negative impression of such behaviour on the self. Killing begets killing (Martens et al 2007):

In sum, one prominent response to the psychological threat associated with an initial act of killing may be to justify such action through continued, wilful killing (p1253).

Lifton (1986) observed this with Nazi doctors in World War II:

"We [Nazis] have gone so far now that we have no way out." There are two possible implications here: the moral principle that the evil could not be undone; and the psychological principle that, having maintained a death factory for a period of time, one felt impelled to continue its function. The psychological point is that atrocity begets atrocity: continuing to kill becomes psychologically necessary in order to justify the killing and to view it as other than it is (quoted in Martens et al 2007 p1252).

In Milgram's case, there was pressure from an "authority figure" to increase the electric shocks, but other studies with "aggression machines" have found increasing levels of shocks without pressure or incentive to do so (Goldstein et al 1975).

This is tempered by the perceived similarity of the

target. There is usually less aggression towards targets perceived as similar because of increased empathy towards such groups. Similarity can be seen as an inhibiting effect on aggression. "However, once one does kill a victim, the more similar the victim to the self, the greater may be the threat to one's psychological equanimity. Thus, perceived similarity to the target may fuel the promulgating effect of initial killing on subsequent wilful killing" (Martens et al 2007 p1253).

1.8.2. MARTENS ET AL (2007)

Martens et al (2007) designed the bug-killing paradigm to test the idea that perceived similarity to the target will increase subsequent aggression/killing. Killing behaviour was measured as the number of small pill bugs put into a grinder during a twenty-second period.

Study 1

Seventy-four introductory psychology students at the University of Arizona, USA were recruited (35 male and 39 female) for this study. They were asked to "Please rate how similar/different you think you are to small insects" on a nine-point scale. Ratings of similarity were based on ideas like bugs are living too or we are all part of the same evolution process, according to post-experimental interviews.

Participants were tested individually under the cover story of "how people in various roles deal with different animals.. in this particular session today, we'll be looking at the role of exterminators who deal with bugs" (p1254). Participants were either introduced to a single pill bug (no-initial-kill) or instructed by the experimenter to put it into the "bug extermination machine" (an adapted coffee grinder)(initial-kill condition). Then participants were left alone with twenty pill bugs and given the opportunity to kill as many of them as they wanted in twenty seconds (self-paced killing).

It was found that in the non-initial-kill condition, greater rated similarity to bugs led to less self-paced killing, but the opposite was true for the initial-kill condition (figure 1.3). An initial kill under the instructions of the experimenter reduced the inhibiting effect on killing of similarity.

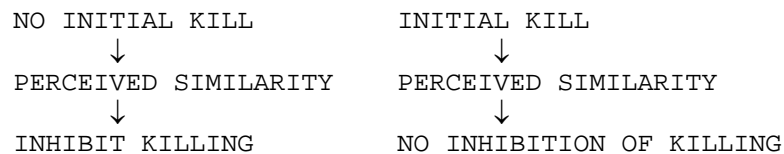


Figure 1.3 - Pattern of findings from Martens et al's (2007) study 1.

Study 2

This study changed the number of bugs in the initial kill to see if this would produce even more self-paced killing. Fifty-three more psychology students (20 male and thirty-three female) were used. Participants were randomly assigned to either an initial kill of one bug or five bugs. The latter group killed more bugs during the self-paced killing period (mean 8.42 vs 6.00). In terms of perceived similarity, there was no relationship between self-paced killing numbers and initial kill of one bug, which contradicted study 1. But for the initial killing of five bugs, perceived similarity produced an increased self-paced killing (figure 1.4).

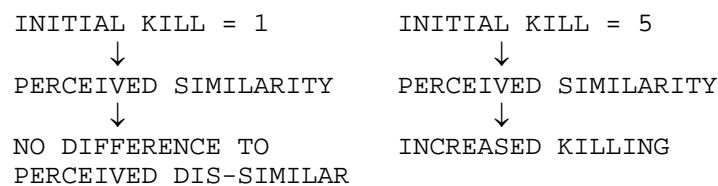


Figure 1.4 - Pattern of findings from Martens et al's (2007) study 2.

"In conjunction with Study 1, these findings suggest that among higher similarity participants, increasing initial killing fuels subsequent killing in an effort to defend against the threat posed by the initial killing" (Martens et al 2007 p1257)(table 1.12).

		PERCEIVED	PERCEIVED
STUDY 1	No initial kill	5***	8
	Initial kill = 1	7	7
STUDY 2	Initial kill = 1	6	6
	Initial kill = 5	10	7

(* = +1 standard deviation above mean) (** = -1 standard deviation above mean)
 (***) = whole numbers only)

Table 1.12 - Summary of results in study 1 and 2 of Martens et al (2007).

Study 3

This study concentrated upon the emotional response of killing bugs among twenty-eight psychology students (nine male and 19 female) who all rated themselves as similar to bugs. Mood was measured prior to and after the self-paced killing using the Expanded Positive and Negative Affect Schedule (PANAS-X). The researchers predicted that "if with more initial killing (five bugs), subsequent killing functions increasingly as a defence against the threat of killing, then the more people choose to kill during the self-paced task, the less negative affect they should experience. If subsequent killing serves as less of a justificatory defence for those who kill only one bug initially, then subsequent killing should not yield emotional benefits" (p1258).

Participants were allocated to one or five initial kills as study 2. The latter group again killed more bugs in the self-paced killing phase (mean 10.23 vs 5.47). Greater killing during the self-paced task predicted more positive mood and less negative mood (eg: less guilt) afterwards for the five-initial-kill condition, but not the 1-initial-kill condition (figure 1.3).

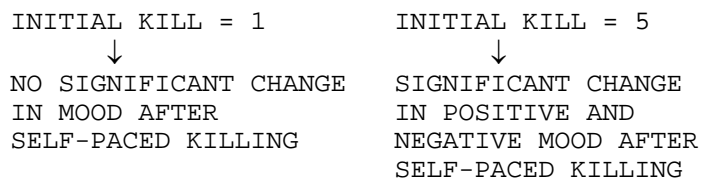


Figure 1.3 - Pattern of findings from Martens et al's (2007) study 3.

Other students, who were asked to read details of this study, predicted that killing five bugs would arouse more threat for the participants than killing one bug.

1.8.3. CONCLUSIONS

Overall, "the present findings suggest a more detailed attending to perceived similarities among antagonistic groups – that contrary to what may seem intuitive, a greater sense of connection between groups may increase the risk for conflict spiralling out of control" (Martens et al 2007 p1262).

These studies are artificial laboratory experiments and the extrapolation to humans may be limited. But the authors argued that the bug-killing paradigm allows researchers to examine an area of behaviour that is

impossible to study in the laboratory usually. The motivations and cognitions of participants can be explored before, during and after bug-killing, whereas real-life human killings can only be studied after the event, if at all.

In terms of ethical concerns, this type of research is no worse than many studies of other topics in social psychology. Table 1.13 summarises the key ethical issues.

ETHICAL ISSUES	COMMENT
Deception	True purpose of study
Informed consent	Knew they would be exterminating bugs
Debriefing	Immediate, and "deceptive elements were fully
Stress	Not really killing bugs, which told afterwards

Table 1.13 - Summary of ethical issues in Martens et al (2007) study.

1.8.4. REFERENCES

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2. Experimental Replications on Obedience since Milgram

- 2.1. Introduction
- 2.2. Cross-cultural replications
- 2.3. General evaluation
- 2.4. References

2.1. INTRODUCTION

Stanley Milgram summarised in 1974 his findings from many years of experimental research into obedience in the 1960s. The findings about the tendency of ordinary individuals to obey authority figures were very important in the history of psychology.

In his experiments, Milgram made naive participants (acting as the teacher) believe that they were giving real electric shocks to a learner ("victim") in order to test memory and punishment. No electric shocks were actually administered, and the behaviour of the "victim" was acting. At the end of the experiment, the participants were told the truth.

The reaction to this study and concern about the ethics of the methodology limited the amount of subsequent research into obedience (Brewer 2001b). However, a small number of replications or similar studies were performed, mainly in the 1970s and 1980s.

Table 2.1 compares the level of baseline obedience (ie: the number of participants who gave maximum electric shocks or maximum scores) found in ten studies including Milgram's original experiment.

STUDY	COUNTRY	BASELINE LEVEL OF OBEDIENCE (%)
Meeus and Raaijmakers (1986;1995)	Holland	91
Miranda et al (1981)	Spain	90
Ancona and Pareyson (1968)	Italy	85
Mantell (1971); Mantell and Panzarella (1976)	Germany	85
Schurz (1985)	Austria	80
Shanab and Yahya (1977)	Jordan	73
MILGRAM (1963)	USA	65
Shanab and Yahya (1978)	Jordan	62
Geller (1978) simulation study	USA	51
Burley and McGuiness (1977)	UK	50
Kilham and Mann (1974)	Australia	28

Table 2.1 - Comparison of the baseline level of obedience in Milgram and subsequent experiments on obedience.

2.2. CROSS-CULTURAL REPLICATIONS

Between 1968 and 1986, replications of Milgram's experiments were carried out in eight countries outside the USA.

Ancona and Pareyson (1968) Italy

This study found an obedience level of 85% of student participants (34 of 40). The maximum level was 330 volts (whereas Milgram used 450 volts). Milgram (1963) found 73% obedience for this voltage level; only nine of his original 40 participants did not go to this level or above.

Evaluation

i) Using a maximum voltage of 330 volts may have been perceived as less dangerous, and thus more obedience than with 450 volts. Furthermore, there were only 22 steps on the shock generator (compared to thirty for Milgram).

ii) The use of students who are not typical of the general population. Students make up less than 5% of the population, and their use produces sampling and participant bias in the research (Brewer 2001a).

iii) The "victim" was played by a professional film actor who was both visible and audible to the participants. In Milgram's "learner in the same room" version, obedience was 40%.

iv) The "victim" responded with a number of reactions to the voltage, including begging "stop now" at 240 volts. In Milgram's experiment, at between 255 and 300 volts, there is an agonised scream, and the learner shouts: "I absolutely refuse to answer anymore. Get me out of here. You can't hold me here".

v) In post-experiment questionnaires, Ancona and Pareyson found that those who obeyed could be divided into roughly half: (a) those participants who obeyed through their trust of authority, and accepted the responsibility for their actions, and (b) those who obeyed because it was ordered, and downplayed the suffering of the "victim".

Mantell (1971); Mantell and Panzarella (1976)
Munich, West Germany

Using 101 men from the general population, this study found a baseline obedience level of 85%. Mantell also included a control group, which Milgram did not, where the participants could choose what level of electric shock to give (known as "self-decision condition"). Obedience was 0% here.

There was also a version of the experiment where the participants were made responsible for their actions. Obedience was 7% in this condition (compared to 2.5% found by Milgram).

Another variation was a condition known as the "delegitimising model condition" where a model was unco-operative beforehand by refusing to shock the learner. The participant saw a confederate refusing to give electric shocks, and this influenced the participants (52% obedience in this condition).

Evaluation

i) Inclusion on a control group is an important part of good experimental design.

ii) It is interesting that this study was in Germany (West) as Milgram had set up his research to explain why the German people obeyed the Nazi leaders and committed many atrocities during the Second World War.

Initially Milgram believed that the German people were different to other people, and, because of the type of socialization that existed in German society, had more of a readiness to obey authority figures (Moxon et al 2003 p218).

iii) The use of males from the general population copied Milgram, who only used female participants in one of 21 experiments. Foster (1997) is concerned about research based upon male participants being generalised to include women.

iv) It has been argued that the participants do not take the experiment seriously, and know that the learner is not really being shocked (Moxon et al 2003). Milgram (1972) argued that the participants showed physical symptoms, like sweating and biting their lips, which could not be feigned.

In post-experiment questionnaires in the German research, the participants reported believing the learner

was really suffering by the end of the experiment (table 2.2).

RESPONSES	NUMBER OF RESPONDENTS
Believed learner was dead or might have died	26
Believed learner was unconscious	23
Believed shocks caused physical damage	5
Believed learner in severe pain but alright	36
Believed learner was "just fine"	9

Table 2.2 - Responses to post-experiment questionnaire about what was happening to the learner in German obedience study.

Kilham and Mann (1974) Australia

In this research, both male (n = 63) and female (n = 62), first year psychology, students were used. This research added another level of chain of command compared to Milgram. The authority figure gave the command to another individual who passed it to the shock generator operator. In the "active obedience condition" (participants as executant) obedience was 28% overall (ie: 40% for males and 16% for females).

In the control conditions, based on choice of level of shock and participant's responsible for their actions, obedience was 0%.

In the "passive obedience condition" (participant as transmitter), where the participant was carrying the message to the shock generator operator, obedience was 54% (males 68%; females 40%) (compared to 92.5% for Milgram).

Evaluation

i) The "victim" of the electric shocks was a "long-haired" student who may have been perceived as more vulnerable or more deserving of shocks than others (Smith and Bond 1993). Milgram used a smartly-dressed middle-aged man.

Farina et al (1966) found that "victims" who appeared to be "losers" (based upon talking beforehand about childhood) received more shocks than those with positive childhoods and backgrounds. This confirmed the "just world hypothesis" (Lerner 1980) that individuals get what they deserve.

ii) Female students were asked to give electric shocks to a female "victim", and male students to a male "victim". Milgram always used a male "victim" (even in the one experiment with female participants). The level of obedience for the women here was much lower than 65% found by Milgram.

Foster (1997) argued that women in social surroundings with men conformed to male norms, which, in the case of Milgram's experiment, was to be obedient in the aggressive actions.

iii) Obedience increased to 68% for men and 40% for women when instructions to obey were given by the participant and another person actually gave the electric shocks. This type of "passive obedience" is different to the "active obedience" of operating the shock generator machine.

However, the idea of obedience along a chain of command would fit with real life cases of destructive obedience in the army, for example; the My Lai massacre of civilians by US soldiers in the Vietnam war (quoted in Moxon et al 2003).

iv) Foster (1997) argued that there are differences to Milgram in this research in age, education, and social class of the participants, and status of the experimenter.

v) The prompts used by the authority figure to encourage the participant to continue in the Australian research was different to Milgram's. The fourth and final prompt in this research, in particular, was different: "I'm taking full responsibility, so you have no option but to continue with the experiment" (Kilham and Mann 1974 p699).

Milgram's authority figure never formally took responsibility for whatever happened in the experiment. The prompts used were, in order: "Please go on", "The experiment requires it", "It's absolutely essential that you continue", and finally, "You have no choice".

vi) The difference in results found in Australia may be because of the different time of this research compared to Milgram's original experiment:

A decade of campus unrest and anti-war demonstrations would have made some difference in student attitudes towards authority, whether governments, college administrators, or scientists (Kilham and Mann 1974 p702).

Burley and McGuiness (1977) UK

This Milgram replication found 50% obedience using twenty male undergraduate students at Glasgow University. The research was actually interested in "social intelligence" (the ability to understand others) and altruistic behaviour (in this case, not giving electric shocks).

The mean "social intelligence" score was 106.20 for those who obeyed most, and 126.30 for those who obeyed least (where a higher score means better "social intelligence").

Evaluation

i) The use of students, and males only. Also a small sample of twenty only.

ii) There were only fifteen switches on the electric shock generator going from 15 to 225 volts. Obedience at 225 volts could be perceived by the participants as less serious than at 450 volts.

Shanab and Yahya (1977;1978) Amman, Jordan

(a) 1977

This study is unique among the replications on Milgram because of the use of children: 192 in total from three age groups - 6-8, 10-12, and 14-16 years-old. Overall obedience was 73% compared to 16% for control group. Tables 2.3 and 2.4 show the results based on age group.

AGE GROUP (yrs)	EXPERIMENTAL GROUP	CONTROL GROUP
6-8	69	19
10-12	84	12
14-16	66	19

(After Shanab and Yahya 1977)

Table 2.3 - Percentages of obedience based on age groups in Jordanian study.

AGE GROUP (yrs)	EXPERIMENTAL GROUP		CONTROL GROUP	
	MALE	FEMALE	MALE	FEMALE
6-8	18.19	18.31	6.00	4.94
10-12	18.56	19.44	6.69	6.56
14-16	17.25	18.94	8.37	7.87

(After Shanab and Yahya 1977)

Table 2.4 - Mean number of shocks (out of 20) based on age and gender in Jordanian study.

Evaluation

i) The use of children is a concern in terms of the ethics of research. Today this research would probably not be acceptable, particularly among psychologists in this country. Milgram was accused of causing his adult participants psychological distress (Baumrind 1964), and this criticism must be equally valid, if not more so, for child participants here.

ii) The use of a control group, where the participants were free to give any level of electric shock, but must increase each time, is a good experimental design.

iii) This research used approximately half males and half females, unlike many of the other replications here.

(b) 1978

The researchers found 62% obedience among 48 male students, and 12.5% obedience in the control group where the participants were told that they were free to shock the "victim" or not.

Evaluation

i) Inclusion of control group allows good comparison of results with the experimental group.

ii) This is the only replication not performed in a "Western" country.

iii) Traditionally, the white-coated scientist is seen as the authority figure in the "West", but Moghaddam et al (1993) argued that in some countries such a figure is not important. For example, in Iran, the mullah would be the authority figure not a scientist.

iv) The level of shocks in both Jordanian studies were higher than Milgram and Mantell (Blass 1992).

Geller (1978) simulation study USA

This research is different to the others included here because it is a simulation study. It used 91 adult males (between 20-60 years old) recruited by newspaper ads in New York, who had no prior knowledge of Milgram's work.

The scenario was a direct replication of Milgram's original experiment, but all the participants knew the "victim" was a confederate of the experimenter, and that the shock-generator machine did not give electric shocks.

In this research, 51% of the participants obeyed to the maximum shock of 450 volts, and 33% when the experimenter was absent from the room during the experiment. Table 2.5 shows the results here.

	BASELINE EXPERIMENT	EXPERIMENTER ABSENT
Number of participants going to: 450 v	16/31 (26/40)*	10/30 (9/40)
%	51.29 (65)	33.30 (22.50)
Mean maximum shock range (volts)	345-360 (360-375)	285-300 (270-285)
Participant % obedience:		
"most involved"	50	22.2
"least involved"	70	55.60

* Figures in brackets = Milgram

(After Geller 1978)

Table 2.5 - Results from simulation study by Geller (1978).

Evaluation

i) This research is based on role-playing only. Many participants do not become "involved" in the situation. This leads to the recruitment of participants who are good at role-playing, and thus introduces the possibility of sampling bias (Brewer 2001b).

ii) The participants knew that there were no electric shocks being given, and probably they obeyed because they were guessing how they would behave if they were in a particular situation (Moxon et al 2003). Furthermore, are individuals asked to role-play themselves or specific others? The discrepancy between attitudes and behaviour suggests that individuals are not necessarily good at predicting their own behaviour (Brewer 2003).

iii) Even with simulation studies, there are problems of "demand characteristics" and "evaluation apprehension". In other words, participants not behaving as they usually would behave in the situation, but changing the behaviour in some way to suit what they think is expected by the researcher.

iv) Individuals who volunteer are not necessarily typical of the general population.

v) Simulation studies are an attempt to carry out research without deceiving the participants or causing them psychological distress as Milgram did (Mixon 1979).

Other Studies

a) Miranda et al (1981) Spain

Obedience was over 90% with students as participants.

b) Schurz (1985) Austria

With a general population sample, baseline obedience was recorded at 80%.

The obedience task was based upon giving increasing painful ultrasound to the learner, which, the participants were told, could cause injury to the skin at the highest level. This compares the Milgram tradition of using "painful, but not harmful" electric shocks.

Meeus and Raaijmakers (1986;1995) Utrecht, Holland

This is the largest, most recent series of experiments on obedience - 19 experiments in the 1980s using over 400 participants. It is different to Milgram's research because this research does not use electric shocks.

The measure of obedience was based around making negative comments to an apparently unemployed person preparing for a job interview. Each remark became more negative up to the fifteenth comment, which was the measure of obedience.

In the first experiment, 91% of the participants went to the 15th comment (and 83% in the "baseline replication").

Evaluation

i) There was a control group used. The participants were given no instructions to make the remarks, and the participants could choose which remarks to make. Here obedience was 0%.

ii) The task to insult a stranger was not very challenging compared to Milgram's task of giving electric

shocks. Meeus and Raaijmakers also performed two direct replications of Milgram's experiments, and found obedience levels of 57% and 43% respectively.

iii) This research included an experimental version where the participants were given a written description of the experiment beforehand and asked to predict their behaviour. Then in the actual experiment, only 9% obeyed.

iv) In another version of the experiment, participants were told about the procedure in advance. It was expected that obedience would fall in this condition, but it was, in fact, 100%. It may be that individuals who would not have obeyed dropped out after receiving the information about the experiment. This is not known.

v) Meeus and Raaijmakers included role-playing variations of the experiments.

vi) The researchers varied the level of legal liability for whatever happened during the experiments. Where the participant was liable, obedience was 30%, but it was 67% when the psychology department was liable.

vii) These experiments also included two other conditions used by Milgram - "experimenter absent" (experimenter not in room; for example, gives instructions by telephone), and "two peers rebel" (group of three with one participant and two confederates who refuse to obey) (table 2.6).

	MEEUS AND RAAIJMAKERS	MILGRAM
Experimenter absent	36	22.5
Two peers rebel	16	10

Table 2.6 - Percentage of obedience in two experimental versions.

2.3. GENERAL EVALUATION

i) All of the research on obedience reported here are experiments. Generally there are problems with the use of the experiment in psychology, including the artificiality of the situation, and whether the participants take the research seriously (ie: act as if it was a real-life situation - validity).

Concerning these issues, Sheridan and King (1972) found high levels of obedience by male and female participants when asked to give real mild electric shocks

to a puppies, that could be seen to be suffering.

While in terms of involvement in the experiment, Sackhoff and Weinstein (1988) asked participants to put themselves in personal danger if they obeyed. Seventeen volunteers (13 female/four male) were asked individually by a male authority figure in uniform to get a box from a cabinet with "Danger" on the front. Only 4 of the seventeen (28%) obeyed.

ii) The use of volunteers resolves the problem of gaining informed consent from the participants, but such individuals may not be representative of the general population. This will influence the ability to generalise the findings.

iii) There are different levels of obedience from studies around the world, varying from 16% to 91%. This suggests that the nature of obedience is not universal, and highlights the importance of the "social contexts which define the meaning of the orders given" (Smith and Bond 1993). Furthermore, the studies take place over 23 years.

Is it possible to explain the different rates of obedience? Hofstede (1980) has attempted to distinguish types of culture using a number of dimensions, including "masculine-feminine". This dimension is concerned with the emphasis on achievement and interpersonal harmony in a culture. It could be argued that high obedience will occur in "masculine" cultures. Hofstede (1983) ranked a number of cultures on the "masculine-feminine" dimension. There is evidence of some relationship between the ranking compared to the level of obedience found (table 2.7).

Hofstede's dimensions are based on responses to a questionnaire to employees of a well-known US multinational corporation known in the research as "Hermes". The dimensions are not without weaknesses, particularly in attempting to describe different cultures (Smith and Bond 1993).

COUNTRY	RANK OF MASCULINITY	LEVEL OF OBEDIENCE(%)
Austria	2	80
Italy	4	85
Germany (West)	9	85
UK	9 (Great Britain)	50
USA	15	65
Australia	16	28
Spain	37	90
Jordan	no information	73/62

Table 2.7 - Comparison of ranking of "masculinity" and level of obedience.

iv) Only the research from Jordan is not in a "western" country. How applicable are the findings in "non-western" and/or non-industrialised situations?

v) The participants were mainly students (in five replications) and the remainder were from the general population. In a lesser-known replication, Shalala (1974 reported in Blass 1992) used military personnel at Fort Knox, Kentucky. The authority figure was dressed as a lieutenant colonel, and the participants were low-ranking tank crewman. Obedience was 30% and 0% for the "use own judgment" control group.

vi) The obedience research of Milgram prompted many other studies on the relationship of individuals to authority figures, and different aspects of obedience.

One example of the subsequent research variations is Brief et al (1995). They used 76 US undergraduate students to test obedience to superiors in a job interview scenario. Participants were given background material (from the superiors) about the job that either was pro-White, pro-Black, or neutral. Then the participants assessed the employability of a number of applicants, but, in particular, the research was interested in the response to black job applicants.

The results showed the participants were influenced by the opinion of the superiors and showed a form of obedience in the choice of job applicant (table 2.8).

NATURE OF MATERIAL:	PRO-WHITE	PRO-BLACK	NEUTRAL
Mean number of Black candidates chosen	0.88	2.08	1.26
Mean ratings of qualified Black candidates	3.80	4.27	4.23

(After Brief et al 1995)

Table 2.8 - Summary of results from Brief et al (1995).

The work of Stanley Milgram is seen by some as one of the most important study in social psychology or psychology (eg: Elms 1972). Whether this is the case is open to debate, but certainly Milgram's research has inspired much subsequent interest both directly and indirectly.

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3. REPLICATING MILGRAM: ROLE-PLAYING AND VIRTUAL REALITY

- 3.1. Introduction
- 3.2. Role Playing
- 3.3. Virtual Reality

3.1. INTRODUCTION

Stanley Milgram's (1963) research on obedience ⁹ tends not to be replicated today because of the major ethical concerns about it ¹⁰. However, it is possible to use imaginative methodologies to investigate obedience. In the 1970s, this involved role-playing, and today, it is virtual reality simulations.

3.2. ROLE-PLAYING

In the 1970s attempts were made to use role playing. The experimenter describes the situation to the participants who then play out the situation as themselves or as others.

Geller (1978) tried a replication of Milgram's experiment using role playing. Ninety-one adult males aged between 20-60 years were recruited by adverts in New York City for a small payment. They were chosen if they had no knowledge of the Milgram experiment.

Beforehand they filled out the "Role-Playing Ability Scale". All participants knew that the learner in the experiment was a confederate (ie: working for the experimenter), and that the machine was not giving real electric shocks. The participants then role-played three of Milgram's conditions - the basic condition, the experimenter absent condition, and the victim limited contract condition ¹¹.

Similar levels of obedience was found to those in Milgram's original experiment, particularly for those participants "involved" in the role-playing (table 3.1).

GELLER MILGRAM

⁹ Milgram set up a situation where ordinary people appeared to give increasing intensity electric shocks to a man in the next room. Though no electric shocks were actually given, for the participants, they believed the scenario.

¹⁰ a) The anguish and distress caused to the participants was an unacceptable level. b) Potential permanent psychological damage caused to the participants. c) No informed consent for what actually happened in the experiment (Baumrind 1964).

¹¹ The university released from responsibility for what happens in the experiment.

Basic experiment	51.29	65
Experimenter absent	33.30	22.50
Victim limited contract	50	40

Table 3.1 - The percentage of participants who obeyed ¹² in Geller's experiment.

Geller felt that:

Role-playing methods may then take their place among the many acceptable methods available to researchers and be viewed as alternatives to deception rather than replacements for it (p233).

However, it is difficult to judge who is "involved". Generally though, this method is not used very often because of its problems. Namely that it is not the same as the real experiment - all that is happening is "people's guesses as to how they would behave if they were in a particular situation" (Freedman 1969). Because many participants do not become "involved" in the scenarios, there is a tendency to choose participants who are good at role playing. But this is not longer a random sample (table 3.2).

Freedman (1969) was the most critical of role-playing as a methodology arguing that "under most circumstances constitutes a return to the pre-scientific days when intuition and consensus took the place of data" (p108). Furthermore, he added: "advocates of role playing think that co-operative, helpful subjects who are pretending to be in a situation are capable of telling the experimenter how they would have responded in the real situation" (p109).

Role-playing gives estimates, intuitions, insights, and introspections: "If we are studying the myths and values of a society, these data would be useful. If we want to know how people actually behave, they are, at best, suggestive" (Freedman 1969 p111).

Freedman (1969) accepted that role-playing could be used as a:

- Substitute for experimental methods - "Instead of producing fear through a complex manipulation, merely tell the subject to imagine he is afraid; instead of making him angry and seeing how aggressive he acts,

¹² Obedience means participants went to the maximum voltage.

tell him to pretend he is angry and then ask him how aggressive he would be" (pp108-109);

- Combination with experimental methods;
- An alternative where experimental manipulation is not possible;
- Method in its own right (ie: simulation).

STRENGTHS

1. Able to study areas that are no longer acceptable to test in an experiment.
2. No ethical concerns about deception because participants aware of what is happening.
3. Able to get participants to explore how they would feel or think as themselves or as another person.
4. Can introduce conditions and variables that are not possible in real experiments.

WEAKNESSES

1. Not the same as an experiment because participants know what is happening. There is a risk of them simply behaving as the experimenter wants.
2. The success of this technique depends on how seriously and how involved the participants take the study.
3. The tendency to select good "role-players" as participants produces a biased sample.
4. Generally Milgram's experiment is difficult to replicate because the findings are so well-known.

Table 3.2 - Strengths and weaknesses of using role-playing as a methodology to replace experiments.

3.3. VIRTUAL REALITY

Slater et al (2006) performed a replication of Milgram's experiment using an "immersive virtual environment" (virtual reality). The Learner, rather than being a confederate of the experimenter as Milgram used, was a virtual female human.

Thirty-eight volunteers were recruited from University College, London, where the research took place in the Department of Computer Science. Four participants were eliminated for different reasons including a detailed knowledge of the Milgram experiment. However, five participants admitted to knowing about Milgram after the experiment. But this did not seem to affect their

responses in the experiment, the researchers argued.

The participants wore 3D stereo glasses, and a head-tracker "so that the computer refreshes the displays according to head orientation and position, thus allowing the creation of head-movement parallax" (Slater et al 2006).

The procedure followed that of Milgram's experiment. The Teacher read out 32 sets of five words to be remembered, and if the Learner failed to recall them correctly, an increasing electric shock was administered (up to twenty levels). The Learner "would sometimes answer immediately, sometimes pause and look around as if thinking before answering. Sometimes the Learner would protest (including shouting "Stop the experiment") and on three occasions not answer the question" (Slater et al 2006).

The Learner could be seen and heard in one condition (visible condition; VC; n = 23) and not in the other (replies communicated by text)(hidden condition: HC; n = 11).

The experimenter used prompts to get the participants to continue with the shocks, like "Although you can stop whenever you want, it is best for the experiment that you continue, but you can stop whenever you want", or "If she doesn't answer, remember that it is incorrect" (Slater et al 2006). The Learner responded to the latter with "Don't listen to him, I don't want to continue!".

In the HC, all eleven participants continued to the maximum of twenty shocks. While in the VC, seventeen participants stopped at 19 shocks, and the other three participants stopped at 18, 16 and 9 respectively.

Physiological measures of the participants showed that they were stressed as the shocks increased, particularly in the VC. But individuals can show such reactions when watching a film. How did the researchers know that the participants were interacting with the virtual Learner as if human?

Some participants here showed behaviours noted by Milgram. For example, emphasising the correct answer when reading out the list of words, repeating the question when told to shock a wrong answer, and waiting before administering an electric shock (eg: 40 seconds); the "voices of some participants showed increasing frustration at her wrong answers" (Slater et al 2006).

Slater et al asserted that the "main conclusion of our study is that humans tend to respond realistically at subjective, physiological, and behavioural levels in interacting with virtual characters notwithstanding their cognitive certainty that they are not real".

The replication of Milgram's experiment in a virtual environment has both strengths and weaknesses as a specific piece of research as well as a general method for use in psychology (table 3.3).

STRENGTHS

1. Able to test social behaviour and situations that would be ethically unacceptable with humans. This is especially important for topics like destructive obedience. The major issue of deception that Milgram faced was removed as the participants knew the Learner was a virtual human.
2. The method allows researchers to go further than with humans. For example, the virtual Learner slumped forward after nineteen shocks and did not respond. Thus appearing to be dead.
3. Further hypotheses can be explored. Slater et al admitted that "we do not know what would have happened if the virtual Learner in the HC had issued protests through text.. nor what would have happened if the protests of the Learner had been extremely violent" (Slater et al 2006). The suffering response of the Learner could be increased in a way not possible with human confederates.
4. Research has shown that individuals respond realistically to virtual humans in certain circumstances; eg: social anxiety and public speaking before a virtual audience (Pertaub et al 2002).
In fact, Slater et al showed interaction with the virtual human rather than just as observers.
5. It is not necessary to worry about harm to virtual humans. In other words, no electrical shocks were being administered, and even if they were, it would not really hurt the virtual human.
6. Experiments using virtual reality technology will become more acceptable as virtual reality is more common in everyday life (eg: "virtual bank cashier").

WEAKNESSES

1. It is an artificial situation, and however much the participants became immersed in the experiment, it was not the same as real life situations.
However, Slater et al noted some participants "continually had to reassure themselves that nothing was really happening, and it was only on that basis that they could continue giving the shocks".
2. It is expensive and difficult to carry out such experiments requiring complex equipment in a virtual reality laboratory.
3. Despite the developments in technology, virtual humans are 2D images: "Our virtual Learner could never be confused with a real human" (Slater et al 2006).
4. This study was not a direct replication in procedure of Milgram's experiment. For example, there were different amounts of electric shocks, and different conditions. Importantly, the virtual Learner was female while Milgram used a male confederate.

5. There were still ethical concerns with this experiment as the participants showed physiological signs of being distressed.
The researchers pointed out that any distress was transitory. In fact, at the end of the HC, the virtual Learner is shown to be alive and says, "Nothing happened, I'm fine".

6. Generally Milgram's experiment is difficult to replicate because the findings are so well-known.

Table 3.3 - Strengths and weaknesses of virtual reality experiments generally and specifically for a Milgram replication.

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4. PSYCHOLOGY DEBATE: THIS HOUSE BELIEVES THAT STANLEY MILGRAM WAS FULLY JUSTIFIED TO DO HIS RESEARCH INTO OBEDIENCE

FOR

1. Psychology is about the study of behaviour, even the darker aspects of behaviour. There are many cases of ordinary people obeying orders to kill others. It is important for psychologists to understand why obedience can lead to massacres of civilians, like Mi Lai in the Vietnam War in the 1970s, and so it is necessary to study such behaviour.

Milgram, in 1964, said that the problem of "destructive obedience" was "the most disturbing expression of obedience in our time and because it is the most perplexing, merits intensive study".

2. It is important to show that the people who do extreme acts, like genocide, are not a few evil ones, but that anybody can do such behaviour if certain factors exist. Milgram's many experiments attempted to find out what those factors for obedience were.

3. When the factors that lead to obedience are known, individuals can be taught to be disobedient when they are commanded to do acts that are morally wrong.

4. Milgram's experiments did not have any lasting effect upon the participants. The debriefing involved reassurances that the electric shocks were not real and no harm had come to the "learner".

Many of the participants were visited one year after the experiment by a psychiatrist who found no permanent psychological damage.

5. Many of the participants themselves (84%) were glad or very glad to have taken part in such important research. Furthermore, 74% said they felt they had learnt something of personal importance.

In fact, Milgram's work has been called the "most morally significant research in modern psychology", and a "momentous and meaningful contribution to our knowledge of human behaviour".

AGAINST

1. If the end justifies the means, then psychologists could do anything to participants on the basis of the importance of the findings. There are many examples in the history of psychology of the mistreatment of participants (or more appropriately, subjects) by researchers, who believed that they did not have to treat participants with respect (eg: simulating major plane malfunction in flight to test stress).

Reason and Rowan, in 1981, said "good research means never having to say you are sorry".

2. Milgram's work was experimental. This means that it was artificial (ie low ecological validity), and the participants may have behaved differently to real life. Orne and Holland pointed out that people obeyed in the same way as they do when a magician performs a trick to "chop off your head". You know it will be alright.

The best way to study certain behaviours, like destructive obedience, is through research on real-life events (eg: interviews with soldiers who were involved in civilian massacres).

3. Diane Baumrind, in the 1960s, argued that Milgram deliberately caused ordinary people anguish and distress, who had volunteered for what they thought was a memory experiment. Many participants were observed by Milgram himself to sweat, tremble, bite their lips, and even dig their fingernails into their flesh.

The participants were also deceived in many ways. Psychologists should not be proud of such behaviour. Baumrind said that the "fundamental moral principles of reciprocity and justice are violated, when the research psychologist, using his position of trust, acts to deceive or degrade".

4. Furthermore, participants left the experiment in a very different frame of mind compared to when they arrived. Finding out that you have the potential to kill an innocent stranger is disturbing knowledge, which can affect a person's self-esteem. And it was knowledge that the participants did not ask for.

5. Why ordinary people do extreme acts does not have a simple answer. It is too complex to answer by simple experiments that focus upon one variable only (like the experimenter wearing a white coat or not). Real-life situations have shown that fear for one's own life is

also involved. In conflicts around the world, individuals are told to kill their neighbours or else they will be killed.

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